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# ORIGINAL ARTICLE

# Development and psychometric properties of the Geriatric Mistreatment Scale

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**Aim:** Elder mistreatment is a phenomenon that has increased proportionally to the increase in the number of older adults in different populations of the world. So far, in Mexico there is no instrument measuring and assessing this phenomenon. The objective of the present study was to develop and to know some psychometric properties of the Geriatric Mistreatment Scale (GMS).

**Methods:** A documentary and qualitative investigation was undertaken to contextualize the mistreatment phenomenon in Mexico. Each item was included in the preliminary version if it obtained 80% or greater agreement by experts (content validity). The preliminary scale (49-item) was applied to 626 older adults using a probabilistic sample representative of the older adults living in Mexico City. Then a statistical process was carried out to reduce the number of items, prove their internal consistency and associations with other measurements. The 22-item final version of the GMS that assesses physical, psychological, neglect, economic mistreatment and sexual abuse is reported herein.

**Results:** The mean age of participants was  $71.94 \pm 8$  years. The internal consistency (Cronbach's alpha = 0.83) was appropriate. Subject memory complaint, depression, functional dependence and other measurements were associated with overall mistreatment. Regarding prevalence, 10.28% reported having experienced at least one type of mistreatment.

**Conclusion:** The 22-item GMS had an acceptable internal consistency; the relationship with other measurements was significant according to the hypotheses. Therefore, the GMS is recommended for the screening of the five different types of elder mistreatment. **Geriatr Gerontol Int 2012; ••: ••-••**.

Keywords: abuse, aging, elder mistreatment, psychometric properties, screening.

# Introduction

It was in the 1970s that the problem of elder abuse was first made known,<sup>1,2</sup> and one decade later the topic triggered the interest of the scientific community. Since then, several studies allowing us to better understand this phenomenon have been carried out. Elder mistreatment and other forms of violence have become problems linked to public health and criminal justice,<sup>3</sup> as well as to the violation of human rights. Their diagnosed incidence is on the rise as a result of population aging and the invisibility of the phenomenon, which leads to the absence of preventive and intervention measures. Currently, this phenomenon is still poorly recognized and reported, despite its impact on health, social aspects and people's quality of life, as well as on morbidity and mortality.<sup>4,5</sup>

Regarding prevalence, in Australia, Canada, the UK and other countries, 3–10% of older adults have been found to have experienced some type of mistreatment at home. In a broader set of investigations, the estimated prevalence is 3–27.5%.<sup>6</sup> Recently, prevalence rates have been estimated with representative household samples of the elderly population. For example, in 2004 the first national survey on elder mistreatment and neglect found that 18.4% of the surveyed people experienced at least one type of mistreatment during the 12 months before the interview.<sup>7</sup> In Mexico, like in other Latin American countries, there are no data on this indicator; there are only a few estimates based on local studies or complaints filed at legal and social services.

Publications at the world level show the creation of several instruments, protocols, and guidelines aimed at detecting and assessing elder mistreatment.<sup>8</sup> Most of them were created to be used in hospitals, clinics or in

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the home care setting.<sup>9</sup> None of these instruments were specifically created for the Spanish-speaking population and, so far, we only know about the linguistic adaptation to Spanish of two instruments from Spain (Elder Abuse Suspicion Index and Social Work Evaluation Form).<sup>10</sup> Therefore, the purpose of the present study was to develop and to know some psychometric properties of a specific instrument to assess and measure elder mistreatment. The present study is part of the project "Elder mistreatment: a socio-demographic characterization in Mexico City (2005)".

# Methods

#### Sample

The data corresponds to people aged 60 years or older living permanently in their homes within the boundaries of Mexico City. A probabilistic sample was designed with a two-stage and cluster-based sampling scheme, taking the total population of Mexico City from the National Population Census 2000. The sample size was calculated considering that the variable of interest was unknown; that is, the proportion of older adults undergoing mistreatment; 0.04 was considered as the absolute error. The sample size was of 626 people aged 60 years or older living in Mexico City. The interview was applied in the home to the elderly people that were selected in sample. The staff in charge of data collection was composed of professionals in the field of social and medical sciences, all of whom had previous experience in mistreatment and received ex professo training. The protocol was approved by a local research committee. Written consent was given by all participants, including consent to use their comments anonymously. The inclusion criteria was the informed consent and the exclusion criteria included: suffering from any acute or severe chronic illness, and being less alert or suffering from severe aphasia, severe impaired vision and/or hearing that in the judgment of the authors affected the quality of responses.

#### Description of the procedure

In the development of the Geriatric Mistreatment Scale (GMS), quantitative and qualitative methodological strategies were combined, which were developed in three stages: review of the documentary sources, contextualization of the problem and conformation of the scale.

#### First stage: Review of documentary sources

This stage included a systematic review of the scientific literature on the topic using the PubMed electronic database, as well as journals, books, and websites of government and academic organizations. As a result of this search, a considerable number of scales was found with the following particularities: they had various objectives, they were developed with specific research purposes, and most of them were meant to be applied in the clinical practice and were prepared for specific linguistic and cultural settings, without the linguistic and cultural adaptation to a Spanish-speaking country. Some of these scales detected only one specific type of mistreatment; others did not detect cases, but only inquired about the suspicion of mistreatment, with different quantitative, qualitative and combined approaches, and only a few of them had been assessed. Because of the aforementioned characteristics, these instruments had limitations and their viability to be applied to the Mexican setting was poor. However, certain questions from the two instruments and scales were considered when preparing our questionnaire.<sup>11,12</sup>

#### Second stage: Problem with the contextualization

To contextualize the problem, we approached two public institutions that provide legal and social services in Mexico City: the National Institute for the Elderly (Spanish acronym INAPAM), and the Family Violence Attention and Prevention Units (Spanish acronym UAPVIF) located in Mexico City. A total of 28 253 files of complaints filed from 1 January to 31 December 2005 were reviewed; with this information, a database of 866 cases of denounced and diagnosed mistreatment cases was created. The information analysis allowed us to carry out a holistic interpretation of elder mistreatment in Mexico. We reached the conclusion that it is a very complex phenomenon, which is probably seldom reported, with manifestations at multiple levels (psychological, physical, economic, legal and social).

## Third stage: Conformation of the GMS

Two substages were considered for this purpose: the first one consisted of creating the preliminary version of the GMS to be applied to the target population; the second one consisted of item reduction, based on the item reduction criterion, to obtain the final version of the GMS.

## First substage: Content validity

A first version of the scale was thus generated as a result of the consensus of a survey expert group, and a multidisciplinary panel of social and health sciences professionals, and the following were formulated: 12 questions on physical, 13 on psychological, nine on economic mistreatment, 11 on neglect and abandonment, and six on sexual abuse. This first version was applied to a pilot group of 60 elderly people at their household to verify the comprehension and reproducibility level. The results were analyzed by the panel of experts (an item was included if at least 80% of the experts agreed on it); changes were made in the phrasing of 11 items, and two were deleted. Each section included the option of "other" in case the person wanted to report a different situation. This version was applied to a second pilot group of 20 elderly people. With the second pilot test information, the expert panel reached a consensus on the 49-item preliminary version (Table 1). The 49-item GMS was applied to 626 elderly people in the target population selected by means of a probabilistic sample.

#### Second substage: Item reduction

Once the instrument was applied, we went on to the second substage to reduce the items based on the procedures reported in previous works,<sup>13</sup> in order to obtain the final version of the GMS.

#### Translation-retranslation

Once the final version was obtained; we wanted to make an English version available to encourage its use in non-Spanish-speaking populations, following a standardized procedure for the adaptation of scales (Table 3).<sup>14</sup>

#### Variable measurement

The GMS (Table 3) was designed to measure five types of mistreatment. Each of the items allows a dichotomous-type response (0 = no occurrence, 1 = occurrence). We consider each question to include an act of mistreatment in the past year, so if a person answers "yes" to at least one item, it is considered mistreatment. This can be scored with the 22-item scale (general mistreatment) or specifically for type of mistreatment.

Besides the questions included in the GMS, sociodemographic and health characteristics were also collected in the questionnaire. This included information on the age (in years), sex (male, female) and marital status (without a partner: single, widow/widower, divorced, separated; with a partner: married, consensual union); schooling was determined by the number of years of education (no schooling: 0 school years; with 1 or more years of school); in regard to economic activity, all those who answered "yes" to the following question were defined as economically active: Did you work last week? Those who answered "no" were defined as economically inactive.

For self-reported general health (SRGH), the following question was asked: "Currently, how do you consider your overall health status?" For purposes of the analysis, it was grouped into two: (i) good health status (very good and good); and (ii) poor health status (fair, poor and very poor); this question has been used previously in different studies.<sup>15</sup>

Depression was explored by means of the question: "Do you often feel sad or depressed?" which represents a reliable and valid measure for screening depression.<sup>16</sup>

Subject memory compliant (SMC) was explored by means of the question: "Have you had memory loss problems?" This question has been used in multiple studies with a high predictive value for negative outcomes.<sup>17</sup>

For activities of daily living (ADL), we used Katz's Index, which assesses five basic activities and is widely used internationally. For the purposes of the study, someone was considered as dependent if he/she reported dependence in at least one basic activity.<sup>18</sup>

For associations with other variables, we proposed the hypothesis that mistreatment would be associated with being a female, being elderly, not having a partner, having a low SRGH, SMC and depression, and being dependent for ADL. The mistreatment would not be associated with the schooling level and the work activity of the elders surveyed.

#### Statistical analysis

For item reduction, item-total correlations were analyzed by Spearman's correlation statistic. An exploratory factorial analysis was carried out by means of axis factoring and varimax rotation; the Kaiser–Meyer–Olkin statistic was carried out to assure the adequacy of the correlations matrix, and Bartlett's test of sphericity. The internal consistency of the final version of the GMS was determined by Cronbach's alpha.

To estimate the association between the mistreatment and other variables (all of them dichotomous), a univariate analysis was carried out by means of simple logistic regression. Then all the variables that resulted in being significantly (P < 0.05) associated were included in a final model. The odds ratio and 95% confidence intervals (95% CI) were obtained from the beta coefficients and their standard errors, respectively. Statistical analyses were carried out using STATA version 10 for Windows (StataCorp, College Station, TX, USA).

Finally, a descriptive analysis was carried out for the sociodemographic and clinical characteristics by means of frequencies and percentages.

## Results

The item reduction procedures are described in detail in Table 2. As a result of this reduction, the final version of the 22-item GMS (Table 3) was obtained, as discussed previously. It was designed to measure five types of

Table 1	Preliminary version	of the Geriatric Mistreatme	ent Scale (49-item; English version)
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In the	last year		
	ICAL	NEGI	
M1	Have you been hit?	M25	Has anyone kept you from getting the economic resources needed for your subsistence?
M2	Have you been punched or kicked?	M26	Has anyone kept you from getting food or your pension, if you have one?
M3	Have you been burned?	M27	Has anyone kept you from getting the personal hygiene products you need?
M4	Have you been shoved or have you had your hair pulled?	M28	Has anyone kept you from getting clothes, footwear, etc.?
M5	Have you been forced to eat?	M29	Has anyone kept you from getting the medications you need?
M6	Have you been tied or tied to a chair?	M30	Has anyone refused to give you the eye glasses, hearing aid or denture that you need?
M7	Have you been locked in a room or a house?	M31	Have you been denied protection when you need it?
M8	Have you had an object thrown at you?	M32	Have you been left alone for long periods of time?
M9	Has anyone tried to choke you or choke you to death?	M33	Have you been abandoned in a hospital, house, restaurant or anywhere else?
M10 M11	Have your medications been used inappropriately? Have you been assaulted with a knife or blade?	M34 ECON	Have you been denied access to the house where you live? NOMIC
PSYC	HOLOGICAL	M35	Has anyone managed or does anyone manage your money without your consent?
M12	Has anyone threatened to physically harm you?	M36	Has your money been taken from you?
M13	Has anyone threatened to take you to a shelter, nursing home or house for the elderly?	M37	Has anyone taken any of your belongings without your permission?
M14	Has anyone threatened to take you elsewhere to live?	M38	Has anyone forged your signature?
M15	Has anyone threatened to punish you?	M39	Have you been forced to sign or put your fingerprint in documents such as: power of attorney, testament, deeds or others?
M16	Have you been insulted?	M40	Have any of your properties been sold without your consent?
M17	Have you been humiliated or made fun of?	M41	Have you been forced to buy things for others?
M18	Have you been ignored or treated with indifference?	M42	Have you been pressured so that you no longer own your house or any other property?
M19	Have you been isolated or kicked out of your house?	M43	Has anyone forced you to sell or formalize a property in exchang for taking care of you forever and they did not deliver?
M20	Has anyone made you feel afraid?	SEXU	
M21	Have your decisions not been respected?	M44	Have you been forced to have sex even if you did not want to?
M22	Have you been forbidden to go out or to be visited?	M45	Have you been forced to have sex in a way that you do not want to?
M23	Have any of the people living with you stopped talking to you?	M46	Has anyone touched your genitals without your consent?
M24	Has anyone assaulted your stuff or your animals?	M47	Have you been raped?
		M48 M49	Has anyone taken pictures of you naked without your consent? Have you been forced to watch sexual programs or videos that
		1,117	make you feel uncomfortable?

Who was responsible for the mistreatment?

Gen	der
Female	Male
	Female Female Female Female Female Female Female Female

	Exclusion criteria:	Eliminated items
Item reduction	More than 30% missing	10 items were eliminated:
	C C	M3, M5, M6, M9, M10, M27, M33, M43, M45, M48
		No. remaining items: 39
	Redundancy (>0.75)	2 items with a high correlation: M44 M47
		It was decided to eliminate: M47
		No. remaining items: 38
	Item-total correlations ( $\leq 0.25$ )	6 items were eliminated:
		M7, M16, M23, M25, M26, M39
		No. final remaining items: 32
	Factorial analysis	Eliminated items: 10
	Items eliminated if they could not get	M12, M13, M14, M15, M24, M30, M32, M38, M41,
	0.40 in any factor or if >0.40 was	M49
	obtained in two or more factors and	No. final remaining items: 22
	the difference between them was <0.20	C C

 Table 2
 Item reduction process in the questionnaire to detect elder mistreatment

mistreatment, if a person answered "yes" to at least one item, it was considered mistreatment.

#### Internal reliability

The overall Cronbach's alpha = 0.83 for the 22-item GMS, 0.82 for psychological mistreatment, 0.72 for physical mistreatment, 0.55 for economic mistreatment, 0.80 for neglect and 0.87 for sexual abuse.

A total of 626 older adults were interviewed; 13 records were deleted because of missing answers to most of the questions, with a final result of 613 people included in the analysis. The mean age was  $71.94 \pm 8$  years SD (range 60–97), 62% were women, 80% had at least 1 year of schooling, close to half reported being active, most reported not having a partner, most SRGH was poor, one-third of the respondents reported SMC, 36% reported feeling sad and close to 10% had dependence in at least one ADL (Table 4).

The association with other measurements was according to the hypotheses proposed – mistreatment was associated with age, sex, marital status, SRGH, SMC, depression and ADL. We did not find an association with schooling and work activity (Table 5).

Regarding prevalence, using the 22-item GMS, a 10.28% overall frequency of mistreatment was obtained, with psychological mistreatment as the most frequent one (6.20%), followed by physical mistreatment (3.26%), economic mistreatment (2.61%), neglect (0.98%) and sexual abuse (0.82%).

# Discussion

The GMS is the first instrument created to assess mistreatment of older people in a Spanish-speaking population with conceptual conformity and yielded satisfactory results in terms of psychometric properties, and was psychometrically crucial. Its starting point is a definition resulting from the phenomenon's contextualization within the Mexican population. We consider that the 0.83 overall internal consistency was respectable and matches most of the previously designed scales, in which the alpha coefficient has ranged from 0.78 to 0.92.<sup>12,19-21</sup> Cronbach's alpha by type of mistreatment was acceptable (from 0.72 to 0.87), except for economic mistreatment (0.55), but because of the importance of evaluating this type of mistreatment, we decided to include it in the final version. It will be taken with caution and future studies should corroborate its internal consistency.

The relationship of mistreatment with female sex and age could be seen in the bivariate analysis (Table 4). Even though most of the studies have found a higher percentage of mistreated females than males,<sup>22,23</sup> it is important to mention that, in the analysis of mistreatment, the individual's sex and age are two important characteristics to bear in mind. After 80 years-of-age, the chance of mistreatment increases in both males and females. Therefore, age might increase the risk of experiencing mistreatment.<sup>24</sup> Sex differences, in turn, are more related to the type of mistreatment, as women are the ones experiencing the worst cases of physical and psychological/emotional mistreatment, and they are the main victims of sexual abuse as well.25 Another study showed that a higher proportion of women undergo emotional, physical and financial mistreatment, whereas males experience abandonment more often, followed by physical and emotional mistreatment.26

Another mistreatment-related factor was the poor SRGH; previous papers have shown a close relationship in older people.<sup>27</sup>

Spanish version (origin	al version)	English version (translation retranslation)		
En el último año		In the last year		
FISICO		PHYSICAL		
1. ¿Le han golpeado?		1. Have you been hit?		
<ol><li>¿Le han dado puñetazos o patadas?</li></ol>		2. Have you been punche		
	o le han jalado el pelo?	3. Have you been shoved	or have you had yo	ur hair
4. ¿Le han aventado a		pulled?		
	con algún cuchillo o navaja?	4. Have you had an object thrown at you?		
PSICOLOGICO		5. Have you been assaulted with a knife or blade?		
	o se han burlado de usted?	PSYCHOLOGICAL		
	on indiferencia o le han ignorado?	6. Have you been humiliated or made fun of?		
	le han corrido de la casa?	7. Have you been treated with indifference or ignored?		
9. ¿Le han hecho sen		8. Have you been isolated or kicked out of the house?		
10. ¿No han respetado		9. Has anyone made you		
11. ¿Le han prohibido	salir o que la visiten?	10. Have your decisions no		
NEGLIGENCIA		11. Have you been forbidd	en to go out or be	visited?
	proporcionar la ropa, el calzado,	NEGLECT		
etc?		12. Has anyone kept you fi	om getting clothes	, tootwear,
	suministrar los medicamentos que	etc.?	• •	
necesita?		13. Has anyone kept you fi	om receiving the r	nedications
	otección cuando la necesita?	you need?	1	1
	cceso a la casa que habita?	14. Have you been denied		
ECONOMICO		15. Have you been denied	access to the house	e where you
	ado o maneja su dinero sin su	live?		
consentimiento?		ECONOMIC		
17. ¿Le han quitado si		16. Has anyone managed or is anyone managing your		
	n permiso algún bien de su	money without your consent?		
propiedad?		17. Has your money been taken from you?		
19. ¿Le han vendido alguna propiedad de su pertenencia		18. Has anyone taken any of your belongings without		
sin su consentimie		your permission?	ortion been cold wit	hout your
	o para que deje de ser usted el	19. Have any of your properties been sold without your		
	asa o de alguna otra propiedad?	consent?		
M42		20. Have you been pressured so that you no longer own		
SEXUAL	non relaciones controles cun que	your house or any other property? SEXUAL		
	ner relaciones sexuales aunque	21. Have you been forced to have sex even if you did not		
usted no quiera?	s genitales sin su consentimiento?	want to?		
¿Quién fue el responsa		22. Has anyone touched your genitals without your		
		consent?	ui gennuis whiteu	your
1 = Cónyuge o Compañero (a)	12 = Cuñado (a)	English adaptation of GMS	is available by em	ail to
	13 = Concuño(a)	correspondence author.	is available by enit	
2 = Hijo (a) 3 = Hijastro (a)	14 = Ahijado (a)	Who was responsible for th	e mistreatment?	
4 = Hermano(a)	15 = Compadre, comadre 16 = Familiar, pariente, pariente	who was responsible for th	Gender	
5 = Hermanastro(a)	lejano, otro parentesco	1 = Spouse/Partner	Female	Male
6 = Nieto (a)	17 = Huésped	2 = Child	Female	Male
7 = Bisnieto(a)	18 = Inquilino (a)	3 = Child-in-law	Female	Male
8 = Tio (a)	19 = Vecino (a)	4 = Grandchild	Female	Male
9 = Sobrino(a)	20 = Cuidador (a)	5 = Parent	Female	Male
10 = Primo (a)	21 = Otra persona no familiar	6 = Other relative	Female	Male
11 = Nuera, yerno	99 = No respondió	7 = Informal caregiver	Female	Male
		8 = Formal caregiver	Female	Male
		9 = Neighbor	Female	Male
		10 = No relation	Female	Male
			esn't answer	
			een't know	

**Table 3** Final scale for the detection of abuse in elderly people 22-item Geriatric Mistreatment Scale (Spanish and English version)

999 = Doesn't know

Table 4	General characteristics of the sample
studied	

Variables	<i>n</i> = 613		
	Frequency (%)		
Age (years)			
≥80	121 (19.74)		
≤79	492 (80.26)		
Sex			
Female	378 (61.66)		
Male	235 (38.34)		
Schooling (years)			
0 years	122 (19.9)		
1 or more	491 (80.10)		
Economic participation			
Inactive	299 (48.78)		
Active	314 (51.22)		
Marital status			
Without a partner	354 (57.75)		
With a partner	259 (42.25)		
Self-reported general health			
Poor	344 (56.12)		
Good	269 (43.88)		
Subject memory complaint			
Yes	196 (31.97)		
No	417 (68.03)		
Depression			
Yes	223 (36.38)		
No	390 (63.63)		
Activities of daily living			
Dependence in one or more	63 (10.28)		
No dependence	550 (89.72)		

Schooling was not found to be related to mistreatment. The absence of an association has been confirmed in previous studies, as it seems that mistreatment occurs similarly in the different socioeconomic strata and schooling levels; differences might be observed when one analyzes the types of mistreatment.<sup>28</sup> Elder mistreatment is therefore a problem that occurs in both rich and poor countries, and at all levels of society.<sup>3</sup>

Some factors have certainly been often associated with mistreatment, such as depression, which has been considered as a red flag or a symptom of mistreatment.<sup>29,30</sup> Some studies have reported depression as a cause and others as a consequence, or both. The present study showed a significant association with depression, but the direction of this association cannot be concluded because of its cross-sectional design.

Relying on someone to carry out at least one of the ADL increases the risk of experiencing mistreatment.<sup>31</sup> Likewise, it has been shown that when the dependence level increases, the chance of experiencing mistreatment

also increases.<sup>24,25</sup> The present results corroborated this association.

The SMC has been recognized as a practical and simple approach to assess cognitive impairment.<sup>18</sup> In the present study, we found a relationship between SMC and mistreatment. Cognitive impairment in elderly people is one of the major causes of functional dependence. In trying to fulfil the basic and instrumental daily life needs of the dependent individual, the people in charge of the older adult might experience caregiver's overload.32 Such a burden has been considered to be one of the main factors that can increase the risk of physical mistreatment, as well as neglect, particularly in these vulnerable individuals.<sup>33,34</sup> Finally, it is important to take into account the fact that elder mistreatment is not the consequence of a single factor, but it is rather the result of the interaction of personal, family, social and cultural factors.

Regarding the overall frequency of mistreatment that we found in our population (10.28%), this figure is similar to those reported by other studies.<sup>35,36</sup>

Psychological mistreatment is, in turn, the most frequent type in our population, and it is comparable with what previous papers have reported in other countries.<sup>6</sup>

The frequencies of economic, physical mistreatment and sexual abuse are similar to the results of studies in other countries; however, a review of the literature shows that there are important differences in the prevalence of different types of mistreatment; for example, economic mistreatment<sup>37</sup> or neglect<sup>38</sup> also appears as the most frequent type of mistreatment. Perhaps these differences are related to methodological and cultural aspects.<sup>6</sup>

The following limitations of the present study must be pointed out: it was not possible to assess mistreatment with another scale to corroborate the convergent validity and external reliability; however, we believe that the detailed qualitative research that we carried out to create the theoretical model for our population did support the use of the scale. Despite these limitations, we believe that the positive properties of the GMS, such as its easy application, as it contains direct and easy-tounderstand questions, allow us to provide an in-depth report identifying five different types of mistreatment.

Because of the aforementioned positive properties, we definitely recommend using the GMS in the clinical setting, as well as in social studies seeking to investigate this phenomenon within households or at meeting places.

## **Disclosure statement**

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Variables	Odds ratio	95% Confidence Interval	<i>P-</i> value
Age (≥80 years)	2.06	1.16-3.66	0.01
Sex (female)	2.13	1.16-3.90	0.01
Marital status (without a partner)	1.94	1.10-3.45	0.02
Schooling (0 years)	1.56	0.86-2.84	0.14
Economic participation (inactive)	0.84	0.56-1.60	0.84
Self-reported general health (poor)	2.28	1.27-4.09	0.005
Subject memory complaint (yes)	2.61	1.51-4.42	< 0.001
Depression (yes)	3.76	2.17-6.51	< 0.001
Dependence in one or more activities of daily living	4.96	2.67-9.23	< 0.001

**Table 5** Results of the relationship between Geriatric Mistreatment Scale and other variables using simple logistic regression n = 613

The Geriatric Mistreatment Scale considered mistreatment if a person answered "yes" to at least one item.

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